

I CLAIM:

- Sub 2  
1.1
1. Archery equipment comprising in combination:
- (a) a bow having a bowstring;
  - (b) an arrow having a shaft, said shaft including a rear end;
  - (c) a nock for disengageably engaging said rear end with said bowstring; and
  - (d) said nock including an insert attached to said rear end, a receiver for engaging said bowstring and disconnect means for disengageably engaging said insert with said receiver.
2. The archery equipment as set forth in Claim 1 wherein said disconnect means includes magnetic means.
3. The archery equipment as set forth in Claim 2 wherein said magnetic means includes a magnet secured to one of said insert and said receiver and a magnetically responsive member secured to the other of said insert and said receiver.

1           4.     The archery equipment as set forth in Claim 3 wherein said receiver includes a  
2     cavity for receiving said insert and wherein said magnet and said magnetically responsive  
3     member are disposed within said cavity during engagement of said insert with said receiver.

1           5.     The archery equipment as set forth in Claim 1 wherein said receiver includes a  
2     notch for receiving said bowstring and retention means for retaining said bowstring within said  
3     notch during discharge of said arrow to prevent disengagement of said receiver from said  
4     bowstring.

Sub 3  
1           6.     The archery equipment as set forth in Claim 5 wherein said retention means  
2     comprises a pin extending across said notch.

1           7.     The archery equipment as set forth in Claim 1 wherein said shaft is tubular and  
2     wherein said insert includes a stud for penetrable engagement with said rear end.

1           8.     The archery equipment as set forth in Claim 1 wherein said shaft is solid and  
2     wherein said insert includes a cavity for receiving said rear end.

1 9. A nock for engaging the rear end of an arrow with a bowstring of a bow, said  
2 nock comprising in combination:

3 (a) an insert fixedly attached to the rear end of said arrow;

4 (b) a receiver for capturing the bowstring and maintaining the bowstring captured  
5 during discharge of the arrow from the bow; and

6 (c) disconnect means for disengageably engaging said insert with said receiver.

7 10. The nock as set forth in Claim 9 wherein said receiver includes a notch for  
8 penetrable engagement by the bowstring and means for retaining the bowstring within said notch  
9 during discharge of the arrow from the bow.

10 11. The nock as set forth in Claim 9 wherein said disconnect means includes magnetic  
11 means for disengageably engaging said insert with said receiver.

1 12. Thenock as set forth in Claim 9 wherein said receiver includes a cavity for  
2 receiving a part of said insert and for locating said disconnect means therein during engagement  
3 of said insert with said receiver.

1 13. Thenock as set forth in Claim 12 wherein said disconnect means includes a  
2 magnet attached to said receiver within said cavity and a plate attached to an end of said insert  
3 locatable within said cavity.

1 14. Thenock as set forth in Claim 9 wherein the arrow includes a tubular shaft and  
2 wherein said insert includes a stud for penetrable engagement with the rear end of the tubular  
3 shaft.

1 15. Thenock as set forth in Claim 14 wherein said disconnect means includes  
2 magnetic means for disengageably engaging said insert with said receiver.

1 16. Thenock as set forth in Claim 9 wherein the arrow includes a solid shaft and  
2 wherein said insert includes a cavity for receiving the rear end of the tubular shaft.

1 19. The method as set forth in Claim 18 wherein said step of disengageably engaging  
2 includes the step of creating and maintaining magnetic attraction between the insert and the  
3 receiver when the insert and receiver are engaged with one another.

1 20. The method as set forth in Claim 18 wherein said step of capturing includes the  
2 step of retaining the bowstring within a notch in the receiver.

3 21. The method as set forth in Claim 20 wherein said step of disengageably engaging  
4 includes the step of creating and maintaining magnetic attraction between the insert and the  
5 receiver when the insert and receiver are engaged with one another.

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1           17.     The nock as set forth in Claim 16 wherein said disconnect means includes  
2 magnetic means for disengageably engaging said insert with said receiver.

1           18.     A method for disengageably engaging an arrow with the bowstring of a bow and  
2 for discharging the arrow from the bow upon release of the drawn bowstring, said method  
3 comprising in combination:

4                   (a) attaching an insert to the rear end of the shaft of the arrow;

5                   (b) capturing the bowstring with a receiver to maintain the receiver in engagement  
6 with the bowstring during discharge of the arrow;

7                   (c) disengageably engaging the insert with the receiver to maintain the arrow  
8 attached to the bowstring as the bowstring is drawn back and upon release of the bowstring; and

9                   (d) disengaging the insert from the receiver as a function of the momentum of the  
10 arrow when the bowstring comes to its position of rest.